

**IN THE CLAIMS:**

**Please amend the claims as follows:**

Claims 1-24 (canceled).

25 (previously presented). A thermo-optic switch comprising:

- a first substrate having a first waveguide;
- a heating element in proximity to the first waveguide; and
- a package substrate solder bonded to the first substrate via the heating element.

26 (previously presented). The thermo-optic switch of claim 25, wherein the package substrate has multilayer electrical interconnections therein.

27 (previously presented). The thermo-optic switch of claim 26, wherein the heating element is electrically coupled through the package substrate to electrical bonding surfaces on an exposed surface of the thermo-optic switch.

28 (previously presented). The thermo-optic switch of claim 27, further comprising an electrical controller integrated onto the package substrate.

29 (previously presented). A 2x2 thermo-optic switch, comprising:

- a first substrate having a first waveguide and a substantially parallel second waveguide separated by a distance;
- a first heating element in proximity to the first waveguide;
- a second heating element in proximity to the second waveguide; and
- a package substrate comprising:
  - a first conductive strip solder bonded to said first heating element;
  - a second conductive strip solder bonded to said second heating element; and
  - a third common conductive strip spanning said distance and solder bonded to both said first heating element and said second heating element.

30 (previously presented). The 2x2 thermo-optic switch as recited in claim 29 further comprising:

- a controller to control electric signals to said first conductive strip and said second conductive strip.

31 (new). A thermo-optic switch comprising:

- a first substrate having a plurality of waveguides;
- a plurality of heating elements in proximity to each of said plurality of

waveguides; and

a package substrate having a plurality of conducting strips each solder bonded to one of said plurality of heating elements and further having a common conducting strip solder bonded to the plurality of heating elements.

32 (new). The thermo-optic switch as recited in claim 31, wherein said thermo-optic switch comprises a 2x2 array.

33 (new). The thermo-optic switch as recited in claim 31, wherein said thermo-optic switch comprises an 8x8 array.

34 (new). The thermo-optic switch as recited in claim 31, further comprising:  
a controller operatively connected to said plurality of conducting strips  
and to said common conducting strip.